CLAIMS

What is claimed is:

1. A microcurrent stimulation (MCS) apparatus configured to generate a microcurrent signal and to apply the microcurrent signal to ocular tissue of a user to provide therapy for the ocular tissue, and wherein application of the microcurrent signal to the ocular tissue over a period of time produces therapy results better than placebo.

2. The MCS apparatus of claim 1, wherein the apparatus meets the Federal Food And Drug Administration (FDA) requirements of safety and efficacy.

3. The MCS apparatus of claim 1, wherein at least 32% of users who undergo the therapy over a period of one year experience improvement or stabilization of an ocular disease affecting the ocular tissue.

4. The MCS apparatus of claim 3, wherein at least 65% of the users who undergo the therapy over a period of one year experience stabilization or improvement of an ocular disease affecting the ocular tissue.

5. The MCS apparatus of claim 1, wherein the ocular disease is macular degeneration.

6. A microcurrent stimulation (MCS) apparatus comprising:

electrical circuitry configured to generate a microcurrent signal at a particular carrier frequency modulated at a particular modulation frequency; and

a conductor device coupled on a first end to a terminal of the electrical circuitry and having a second end configured to couple the microcurrent signal into a user's ocular tissue to apply the microcurrent signal to the ocular tissue.

7. The MCS apparatus of claim 6, wherein the apparatus meets the Federal Food And Drug Administration (FDA) requirements of safety and efficacy.

8. The MCS apparatus of claim 6, wherein at least 32% of users who undergo the therapy over a period of one year experience improvement or stabilization of an ocular disease affecting the ocular tissue.

9. The MCS apparatus of claim 8, wherein at least 65% of the users who undergo the therapy over a period of one year experience stabilization or improvement of an ocular disease affecting the ocular tissue.

10. The MCS apparatus of claim 6, wherein the ocular disease is macular degeneration.

11. The MCS apparatus of claim 6, wherein application of the microcurrent signal to the eyes of users results in stabilization or improvement in one of a plurality of diseases selected from the group consisting of:

Dry Macular Degeneration, Wet Macular Degeneration, Stargardt's Disease, Retinitis Pigmentosa, Glaucoma, CMV-Retinitis, Best's Disease Macular Dystrophy, Optic Neuritis, Diabetic Retinopathy, Ischemic Anterior Optic, Neuritis, Usher's Syndrome, Leber's Congenital Amaurosis, Cone-Rod Dystrophy, Cone Dystrophy, Choroideremia and Gyrate Atrophy, Central Retinal Artery Occlusion, Central Retinal Vein Occlusion, Branch Retinal Artery Occlusion, Branch Retinal Vein Occlusion, Central Serous Chorioretinopathy, Cystoid Macular Edema, Ocular Histomplasmosis, Ocular Toxoplasmosis and Retinopathy of Prematurity.

12. The MCS apparatus of claim 6, wherein the conductor device comprises:

a conductive lead connected on a first end thereof to a positive terminal of the electrical circuitry, and

a conductive electrode pad attached to the second end of the conductive lead, the electrode pad having a surface configured to be placed in contact with a closed eyelid of the user.

13. The MCS apparatus of claim 12, wherein the apparatus meets the Federal Food And Drug Administration (FDA) requirements of safety and efficacy.

14. The MCS apparatus of claim 12, wherein at least 32% of users who undergo the therapy over a period of one year experience improvement or stabilization of an ocular

disease affecting the ocular tissue.

15. The MCS apparatus of claim 14, wherein at least 65% of the users who undergo the therapy over a period of one year experience stabilization or improvement of an ocular disease affecting the ocular tissue.

16. The MCS apparatus of claim 12, wherein the ocular disease is macular degeneration.

17. The MCS apparatus of claim 12, wherein application of the microcurrent signal to the eyes of users results in stabilization or improvement in one of a plurality of diseases selected from the group consisting of:

Dry Macular Degeneration, Wet Macular Degeneration, Stargardt's Disease, Retinitis Pigmentosa, Glaucoma, CMV-Retinitis, Best's Disease Macular Dystrophy, Optic Neuritis, Diabetic Retinopathy, Ischemic Anterior Optic, Neuritis, Usher's Syndrome, Leber's Congenital Amaurosis, Cone-Rod Dystrophy, Cone Dystrophy, Choroideremia and Gyrate Atrophy, Central Retinal Artery Occlusion, Central Retinal Vein Occlusion, Branch Retinal Artery Occlusion, Branch Retinal Vein Occlusion, Central Serous Chorioretinopathy, Cystoid Macular Edema, Ocular Histomplasmosis, Ocular Toxoplasmosis and Retinopathy of Prematurity.

18. A microcurrent stimulation (MCS) apparatus comprising:

an electrical circuit configured to generate a microcurrent signal having a

particular carrier frequency modulated by one of at least first and second modulation frequencies;

controller logic in communication with the electrical circuit, the controller logic being configured to control which of at least the first and second modulation frequencies are superimposed onto the carrier frequency and to control first and second time periods during which the first and second modulation frequencies, respectively, are superimposed onto the carrier frequency, the first modulation frequency being greater than the second modulation frequency and the first time period being shorter than the second time period, the second time period commencing upon expiration of the first time period.

19. The MCS apparatus of claim 18, further comprising:

at least a first positive electrode connected on a first end thereof to a positive terminal of the electrical circuit, the first positive electrode having a second end configured to apply the microcurrent signal to ocular tissue of a user; and

at least a second electrode connected on a first end thereof to a negative terminal of the electrical circuit, the first negative electrode having a second end configured to be placed in contact with a location on the user's body.

20. The MCS apparatus of claim 18, further comprising:

an electrode pad connected to the second end of the first positive electrode, the electrode pad comprising a conductive surface that is configured to be placed in contact with a closed eyelid.

21. The MCS apparatus of claim 18, wherein the apparatus meets the Federal Food And Drug Administration (FDA) requirements of safety and efficacy.

22. The MCS apparatus of claim 18, wherein at least 32% of users who undergo the therapy over a period of one year experience improvement or stabilization of an ocular disease affecting the ocular tissue.

23. The MCS apparatus of claim 22 wherein at least 65% of the users who undergo the therapy over a period of one year experience stabilization or improvement of an ocular disease affecting the ocular tissue.

24. The MCS apparatus of claim 18, wherein the ocular disease is macular degeneration.

25. The MCS apparatus of claim 18, wherein application of the microcurrent signal to the eyes of users results in stabilization or improvement in one of a plurality of diseases selected from the group consisting of:

Dry Macular Degeneration, Wet Macular Degeneration, Stargardt's Disease, Retinitis Pigmentosa, Glaucoma, CMV-Retinitis, Best's Disease Macular Dystrophy, Optic Neuritis, Diabetic Retinopathy, Ischemic Anterior Optic, Neuritis, Usher's Syndrome, Leber's Congenital Amaurosis, Cone-Rod Dystrophy, Cone Dystrophy, Choroideremia and Gyrate Atrophy, Central Retinal Artery Occlusion, Central Retinal

Vein Occlusion, Branch Retinal Artery Occlusion, Branch Retinal Vein Occlusion, Central Serous Chorioretinopathy, Cystoid Macular Edema, Ocular Histomplasmosis, Ocular Toxoplasmosis and Retinopathy of Prematurity.

26. A microcurrent stimulation (MCS) apparatus comprising:

electrical circuitry configured to generate a microcurrent signal at a particular carrier frequency modulated at a particular modulation frequency; and

a conductor device coupled on a first end to a terminal of the electrical circuitry and having a second end configured to couple the microcurrent signal into a user's eye to apply the microcurrent signal to the user's eye, wherein application of the microcurrent signal to the eyes of users results in stabilization or improvement in one of a plurality of diseases selected from the group consisting of:

Dry Macular Degeneration, Wet Macular Degeneration, Stargardt's Disease, Retinitis Pigmentosa, Glaucoma, CMV-Retinitis, Best's Disease Macular Dystrophy, Optic Neuritis, Diabetic Retinopathy, Ischemic Anterior Optic, Neuritis, Usher's Syndrome, Leber's Congenital Amaurosis, Cone-Rod Dystrophy, Cone Dystrophy, Choroideremia and Gyrate Atrophy, Central Retinal Artery Occlusion, Central Retinal Vein Occlusion, Branch Retinal Artery Occlusion, Branch Retinal Vein Occlusion, Central Serous Chorioretinopathy, Cystoid Macular Edema, Ocular Histomplasmosis, Ocular Toxoplasmosis and Retinopathy of Prematurity.

27. The MCS apparatus of claim 18, wherein the conductor device comprises:

a conductive lead connected on a first end thereof to a positive terminal of the electrical circuitry, and

a conductive electrode pad attached to the second end of the conductive lead, the electrode pad having a surface configured to be placed in contact with a closed eyelid of the user.

28. A microcurrent stimulation (MCS) apparatus comprising:

an electrical circuit configured to generate a microcurrent signal having a particular carrier frequency modulated by one of at least first, second and third modulation frequencies;

controller logic in communication with the electrical circuit, the controller logic being configured to control which of the at least first, second and third modulation frequencies are superimposed onto the carrier frequency and to control first, second and third time periods during which the first, second and third modulation frequencies, respectively, are superimposed onto the carrier frequency, the first modulation frequency being greater than the second modulation frequency and the first time period being shorter than the second time period, the second time period commencing upon expiration of the first time period, the second modulation frequency being greater than the third modulation frequency and the second time period being shorter than the third time period.

29. The MCS apparatus of claim 28, wherein the apparatus meets the Federal Food And Drug Administration (FDA) requirements of safety and efficacy.

30. The MCS apparatus of claim 28, wherein at least 32% of users who undergo the therapy over a period of one year experience improvement or stabilization of an ocular disease affecting the ocular tissue.

31. The MCS apparatus of claim 30, wherein at least 65% of the users who undergo the therapy over a period of one year experience stabilization or improvement of an ocular disease affecting the ocular tissue.

32. The MCS apparatus of claim 28, wherein the ocular disease is macular degeneration.

33. The MCS apparatus of claim 28, wherein application of the microcurrent signal to the eyes of users results in stabilization or improvement in one of a plurality of diseases selected from the group consisting of:

Dry Macular Degeneration, Wet Macular Degeneration, Stargardt's Disease, Retinitis Pigmentosa, Glaucoma, CMV-Retinitis, Best's Disease Macular Dystrophy, Optic Neuritis, Diabetic Retinopathy, Ischemic Anterior Optic, Neuritis, Usher's Syndrome, Leber's Congenital Amaurosis, Cone-Rod Dystrophy, Cone Dystrophy, Choroideremia and Gyrate Atrophy, Central Retinal Artery Occlusion, Central Retinal Vein Occlusion, Branch Retinal Artery Occlusion, Branch Retinal Vein Occlusion, Central Serous Chorioretinopathy, Cystoid Macular Edema, Ocular Histomplasmosis, Ocular Toxoplasmosis and Retinopathy of Prematurity.

34. A microcurrent stimulation (MCS) apparatus comprising:

electrical circuitry configured to generate a microcurrent signal at a particular carrier frequency modulated at a particular modulation frequency; and

a conductor device coupled on a first end to a terminal of the electrical circuitry and having a second end configured to couple the microcurrent signal into a user's eye to apply the microcurrent signal to the user's eye, wherein application of the microcurrent signal to the eyes of users results in stabilization of macular degeneration in at least 32% of the users.

35. The MCS apparatus of claim 34, wherein the conductor device comprises:

a conductive lead connected on a first end thereof to a positive terminal of the electrical circuitry, and

a conductive electrode pad attached to the second end of the conductive lead, the electrode pad having a surface configured to be placed in contact with a closed eyelid of the user.

36. A microcurrent stimulation (MCS) kit comprising:

an MCS apparatus comprising:

an electrical circuit configured to generate a microcurrent signal having a particular carrier frequency modulated by one of at least first and second modulation frequencies; and

controller logic in communication with the electrical circuit, the controller logic being configured to control which of at least the first and second modulation frequencies are superimposed onto the carrier frequency and to control first and second time periods during which the first and second modulation frequencies, respectively, are superimposed onto the carrier frequency, the first modulation frequency being greater than the second modulation frequency and the first time period being shorter than the second time period, the second time period commencing upon expiration of the first time period.

37. The MCS kit of claim 36, further comprising:

at least a first positive electrode connected on a first end thereof to a positive terminal of the electrical circuit, the first positive electrode having a second end configured to apply the microcurrent signal to ocular tissue of a user; and

at least a second electrode connected on a first end thereof to a negative terminal of the electrical circuit, the first negative electrode having a second end configured to be placed in contact with a location on the user's body.

38. The MCS apparatus of claim 37, further comprising:

an electrode pad connected to the second end of the first positive electrode, the electrode pad comprising a conductive surface that is configured to be placed in contact with a closed eyelid of the user's eye.

39. The MCS apparatus of claim 37, further comprising:

goggles comprising a microcurrent conductor configuration electrically coupled to the electrical circuit and configured to receive the microcurrent signal generated by the electrical circuit and to apply the microcurrent signal to ocular tissue of the user.

40. An apparatus for applying a microcurrent signal to ocular tissue of a user to perform microcurrent stimulation (MCS) therapy, the microcurrent signal being generated by an electrical microcurrent signal generation circuit, the apparatus comprising:

goggles configured to receive a microcurrent signal from the electrical microcurrent generation circuit and to provide the microcurrent signal to at least first and second electrodes of the goggles, the first and second electrodes .

41. A method for performing microcurrent stimulation (MCS) therapy, the method comprising:

applying a microcurrent signal to ocular tissue of a user to provide therapy for the ocular tissue, wherein application of the microcurrent signal to the ocular tissue over a period of time produces therapy results better than placebo.

42. The method of claim 41, wherein the therapy meets the Federal Food And Drug Administration (FDA) requirements of safety and efficacy.

43. The method of claim 41, wherein at least 32% of users who undergo the therapy over

a period of one year experience improvement or stabilization of an ocular disease affecting the ocular tissue.

44. The method of claim 43, wherein at least 65% of the users who undergo the therapy over a period of one year experience stabilization or improvement of an ocular disease affecting the ocular tissue.

45. The method of claim 41, wherein the ocular disease is macular degeneration.

46. The method of claim 41, wherein application of the microcurrent signal to the ocular tissue results in stabilization or improvement in one of a plurality of diseases selected from the group consisting of:

Dry Macular Degeneration, Wet Macular Degeneration, Stargardt's Disease, Retinitis Pigmentosa, Glaucoma, CMV-Retinitis, Best's Disease Macular Dystrophy, Optic Neuritis, Diabetic Retinopathy, Ischemic Anterior Optic, Neuritis, Usher's Syndrome, Leber's Congenital Amaurosis, Cone-Rod Dystrophy, Cone Dystrophy, Choroideremia and Gyrate Atrophy, Central Retinal Artery Occlusion, Central Retinal Vein Occlusion, Branch Retinal Artery Occlusion, Branch Retinal Vein Occlusion, Central Serous Chorioretinopathy, Cystoid Macular Edema, Ocular Histomplasmosis, Ocular Toxoplasmosis and Retinopathy of Prematurity.

47. A method for performing microcurrent stimulation (MCS) therapy, the method

comprising:

applying a first microcurrent signal to ocular tissue, the first microcurrent signal having a first carrier frequency modulated by a first modulation frequency, the first microcurrent signal being applied for a first period of time; and

applying a second microcurrent signal to the eyelid, the second microcurrent signal having the first carrier frequency modulated by a second modulation frequency, the second microcurrent signal being applied for a second period of time, the second period of time being longer than the first period of time, the first modulation frequency being higher than the second modulation frequency.

48. The method of claim 47, wherein the therapy meets the Federal Food And Drug Administration (FDA) requirements of safety and efficacy.

49. The method of claim 47, wherein at least 32% of users who undergo the therapy over a period of one year experience improvement or stabilization of an ocular disease affecting the ocular tissue.

50. The method of claim 49, wherein at least 65% of the users who undergo the therapy over a period of one year experience stabilization or improvement of an ocular disease affecting the ocular tissue.

51. The method of claim 47, wherein the ocular disease is macular degeneration.

52. The method of claim 47, wherein application of the microcurrent signal to the ocular tissue results in stabilization or improvement in one of a plurality of diseases selected from the group consisting of:

Dry Macular Degeneration, Wet Macular Degeneration, Stargardt's Disease, Retinitis Pigmentosa, Glaucoma, CMV-Retinitis, Best's Disease Macular Dystrophy, Optic Neuritis, Diabetic Retinopathy, Ischemic Anterior Optic, Neuritis, Usher's Syndrome, Leber's Congenital Amaurosis, Cone-Rod Dystrophy, Cone Dystrophy, Choroideremia and Gyrate Atrophy, Central Retinal Artery Occlusion, Central Retinal Vein Occlusion, Branch Retinal Artery Occlusion, Branch Retinal Vein Occlusion, Central Serous Chorioretinopathy, Cystoid Macular Edema, Ocular Histomplasmosis, Ocular Toxoplasmosis and Retinopathy of Prematurity.